



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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May 3, 2002

David Sulc  
Nucor Steel  
Rural Route 2, Box 311  
Crawfordsville, Indiana 47933

Dear David Sulc:

Re: Exempt Construction and Operation Status,  
107-15150-00038

The application from Nucor Steel, received on December 14, 2001, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following flexographic labeling printer, to be located at County Road 400 East, Crawfordsville, IN 47933, is classified as exempt from air pollution permit requirements:

- (a) one (1) flexographic labeling printer, identified as FLP-1, with a maximum line speed capacity of 500 feet per second and used to apply labels to galvanized strip from the galvanizing line using four print rolls. The printer uses two print rolls at any time and the other two are in standby mode.

The following conditions shall be applicable:

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

The uncontrolled potential to emit of this emission unit is below the threshold specified in 326 IAC 2-1.1-3(d)(1). Therefore, this emission unit is subject to the provisions of 326 IAC 2-1.1-3 and is considered exempt. Any change or modification which can increase the potential to emit of VOC from the flexographic labeling printer, greater than the threshold in 326 IAC 2-1.1-3 will require prior approval from the IDEM, OAQ.

This existing source has submitted their Part 70 application (T107-7172-00038) on November 14, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original Signed by Paul Dubenetzky  
Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

GS

cc: File – Montgomery County  
Montgomery County Health Department  
Air Compliance – Richard Seckula  
Permit Tracking – Sara Cloe  
Technical Support and Modeling - Michele Boner  
Compliance Data Section - Karen Nowak  
Part 70 Application File - T-107-7172-00038  
Part 70 Permit Reviewer – Melissa Groch

## **Indiana Department of Environmental Management Office of Air Quality**

### Technical Support Document (TSD) for an Exemption for a Part 70 Source

#### **Source Background and Description**

<b>Source Name:</b>	<b>Nucor Steel</b>
<b>Source Location:</b>	<b>County Road 400 East, Crawfordsville, IN 47933</b>
<b>County:</b>	<b>Montgomery</b>
<b>SIC Code:</b>	<b>3312</b>
<b>Operation Permit No.:</b>	<b>107-7172-00038</b>
<b>Operation Permit Issuance Date:</b>	<b>Not Yet Issued</b>
<b>Exemption No.:</b>	<b>107-15150-00038</b>
<b>Permit Reviewer:</b>	<b>Gurinder Saini</b>

The Office of Air Quality (OAQ) has reviewed an application from Nucor Steel relating to the construction and operation of a flexographic labeling printer at the galvanizing line to apply labels to the galvanized strip.

#### **Emission Units and Pollution Control Equipment**

The modification consists of the following emission units and pollution control devices:

- (a) one (1) flexographic labeling printer, identified as FLP-1, with a maximum line speed capacity of 500 feet per second and used to apply labels to galvanized strip from the galvanizing line using four print rolls. The printer uses two print rolls at any time and the other two are in standby mode.

#### **Existing Approvals**

Prior to this exemption approval, Nucor Steel has been operating under previous approvals including, but not limited to, the following:

- (1) Notice-only Change 107-15435-00038 issued January 29, 2002
- (2) Amendment 107-15059-00038 issued November 02, 2001
- (3) Amendment 107-14935-00038 issued November 20, 2001
- (4) Minor Source Modification 107-14782-00038 issued October 04, 2001
- (5) Exemption 107-14780-00038 issued September 18, 2001
- (6) Significant Source Modification 107-12143-00038 issued January 19, 2001;
- (7) Amendment 107-11364-00038 issued November 3, 1999;
- (8) Amendment 107-11154-00038 issued August 11, 1999;
- (9) Amendment 107-10915-00038 issued July 16, 1999;
- (10) Registration 107-9924-00038 issued February 12, 1999;
- (11) Amendment 107-9857-00038 issued September 17, 1998;

- (12) Administrative Amendment 107-9751-00038 issued July 16, 1999;
- (13) Administrative Amendment 107-8731-00038 issued July 31, 1997;
- (14) Administrative Amendment 107-8255-00038 issued June 23, 1997;
- (15) Administrative Amendment 107-8254-00038 issued July 1, 1997;
- (16) Construction Permit 107-7298-00038 issued January 13, 1997;
- (17) Construction Permit 107-5235-00038 issued June 20, 1996;
- (18) Administrative Amendment 107-4840-00038 issued January 17, 1996;
- (19) Administrative Amendment 107-4631-00038 issued September 28, 1995;
- (20) Exemption 107-4263-00038 issued January 5, 1995;
- (21) Exemption 107-4100-00038 issued October 27, 1994;
- (22) Registration 107-3794-00038 issued July 28, 1994;
- (23) Construction Permit 107-3702-00038 issued March 28, 1995;
- (24) Construction Permit 107-3599-00038 issued September 22, 1994; and
- (25) Construction Permit 107-2764-00038 issued November 30, 1993.

### **Enforcement Issue**

There are no enforcement actions related to this emission unit.

### **Recommendation**

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A application for the purposes of this review was received on December 14, 2001. Additional information was received on March 21, 2002.

### **Emission Calculations**

The Permittee conducted test runs for the flexographic labeling printer and determined that the annual usage of ink will be less than 80 gallons and annual usage cleaning solvents will be less than 120 gallons. Based on these usage amounts the potential to emit for VOC is calculated as follows:

VOC from ink = 80 gallons/year X 3.93 lb/gallon X 0.0005 ton/lb = 0.16 tons/year

VOC from solvents = 120 gallons/year X 7.65 lb/gallon X 0.0005 ton/lb = 0.46 tons/year

Total VOC PTE = VOC from ink + VOC from solvent

= 0.16 + 0.46 = 0.62 tons/year

## Potential To Emit of the modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.

Pollutant	Potential To Emit (tons/year)
PM	-
PM-10	-
SO <sub>2</sub>	-
VOC	0.62
CO	-
NO <sub>x</sub>	-

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than the levels listed in 326 IAC 2-1.1-3(d)(1). Therefore, this emission unit is subject to the provisions of 326 IAC 2-1.1-3 and is considered exempt unit. This unit is considered "insignificant activity" under 326 IAC 2-7-1(21), because the uncontrolled potential emissions are below the threshold in 326 IAC 2-1.1-3(d)(1).
- (b) Any change or modification which can increase the potential to emit of VOC from the flexographic labeling printer, greater than the threshold in 326 IAC 2-1.1-3 will require prior approval from the IDEM, OAQ.

## County Attainment Status

The source is located in Montgomery County.

Pollutant	Status
PM-10	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Montgomery County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Montgomery County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

## Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM10	162
SO <sub>2</sub>	139
VOC	52
CO	601
NO <sub>x</sub>	273

- (a) This existing source is a major stationary source because it is in one of the 28 listed source categories and at least one regulated pollutant is emitted at a rate of 100 tons per year or more.
- (b) These emissions were based on actual emissions for 1999 from Nucor Steel mill based on Emissions Inventory of IDEM.

### Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO <sub>2</sub> (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO <sub>x</sub> (ton/yr)
Proposed Modification	-	-	-	0.62	-	-
PSD or Offset Significant Level	25	15	40	40	100	40

- (a) This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

### Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 application (T107-7172-00038) on November 14, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

This status is based on all the air approvals issued to the source.

### Federal Rule Applicability

- (a) The flexographic labeling printer is not subject to the requirements of New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60 Subpart QQ (Standard of Performance for the Graphic Arts Industry: Publication Rotogravure Printing)), because it is not a publication rotogravure process.
- (b) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

**State Rule Applicability - Individual Facilities**

326 IAC 8-5-5 (Graphic Arts Operations)

This flexographic labeling printer, even though, to be constructed after November 1, 1980 (applicability date of this rule), emits less than 25 ton per year of VOC emissions. Therefore, this rule is not applicable to this printer.

**Conclusion**

The construction and operation of this flexographic labeling printer shall be subject to the conditions of the attached Exemption 107-15150-00038.